

C L A I M S

1. An information processing apparatus having a communication apparatus which performs network connection via a wireless relay apparatus, comprising:

5 an information acquisition unit which acquires information of discovered wireless relay apparatuses by discovering the wireless relay apparatuses communicable with the communication apparatus;

10 a profile setting unit which sets communication profiles for the wireless relay apparatuses discovered by the information acquisition unit;

15 a priority condition setting unit which sets a priority condition for determining priorities of the communication profiles to be used by the communication apparatus; and

20 a profile determination unit which determines a communication profile to be used by the communication apparatus on the basis of the information of the wireless relay apparatuses that are acquired by the information acquisition unit, the communication profiles set by the profile setting unit, and the priority condition set by the priority condition setting unit.

25 2. An apparatus according to claim 1, wherein the information acquisition unit discovers the communicable wireless relay apparatuses by receiving beacons from wireless relay apparatuses present around

the information processing apparatus, and acquires at least one of a network name, a communication speed, a security level, a communication channel, and a radio field strength of each wireless relay apparatus as the
5 information of each wireless relay apparatus.

3. An apparatus according to claim 2, further comprising a storage device which stores information acquired by the information acquisition unit.

4. An apparatus according to claim 2, in which
10 the priority condition setting unit sets the priority condition on the basis of at least one of the communication speed, the security level, the communication channel, and the radio field strength, and which further comprises an order determination unit
15 which determines priorities for the communication profiles set by the profile setting unit on the basis of the priority condition set by the priority condition setting unit.

5. An apparatus according to claim 4, wherein the
20 profile determination unit determines the communication profile to be used by the communication apparatus in accordance with the priorities determined by the order determination unit.

6. An apparatus according to claim 4, further
25 comprising:

a connection determination unit which determines whether to automatically connect the communication

apparatus to the wireless relay apparatus in which the communication profile determined by the profile determination unit is set; and

5 a connection processing unit which, when the connection determination unit determines to automatically connect the communication apparatus to the wireless relay apparatus, performs a connection process between the communication apparatus and the wireless relay apparatus in which the communication
10 profile is set, by using the communication profile determined by the profile determination unit.

7. An apparatus according to claim 6, further comprising:

15 a change recognition unit which recognizes a change in communication environment between the wireless relay apparatus and the communication apparatus on the basis of a communication content between the wireless relay apparatus and the communication apparatus which have undergone the
20 connection process by the connection processing unit; and

a profile change unit which changes a currently set communication profile to another communication profile in accordance with a content when the change
25 recognition unit recognizes the change in the communication environment.

8. An apparatus according to claim 6, further

comprising a profile change unit which changes a currently set communication profile to another communication profile when a fault occurs in the communication apparatus.

5 9. A method of connecting a network via a wireless relay apparatus by using a communication apparatus, comprising:

 discovering wireless relay apparatuses communicable with the communication apparatus to
10 acquire information of the discovered wireless relay apparatuses;

 setting communication profiles for the discovered wireless relay apparatuses;

 setting a priority condition for determining
15 priorities of the communication profiles to be used by the communication apparatus; and

 determining a communication profile to be used by the communication apparatus on the basis of the
acquired information of the wireless relay apparatuses,
20 the set communication profiles, and the set priority condition.

 10. A method according to claim 9, wherein in acquiring the information, the communicable wireless relay apparatuses are discovered by receiving beacons
25 from the wireless relay apparatuses, and at least one of a network name, a communication speed, a security level, a communication channel, and a radio field

strength of each wireless relay apparatus is acquired as the information of each wireless relay apparatus.

11. A method according to claim 10, further comprising storing the acquired information in
5 a storage device.

12. A method according to claim 10, in which in setting the priority condition, the priority condition is set on the basis of at least one of the communication speed, the security level, the
10 communication channel, and the radio field strength, and which further comprises determining priorities for the set communication profiles on the basis of the set priority condition.

13. A method according to claim 12, wherein in
15 determining the communication profile, the communication profile to be used by the communication apparatus is determined in accordance with the determined priorities.

14. A method according to claim 12, further
20 comprising:

determining whether to automatically connect the communication apparatus to the wireless relay apparatus in which the determined communication profile is set; and

25 when the communication apparatus is determined to be automatically connected to the wireless relay apparatus, performing a connection process between

the communication apparatus and the wireless relay apparatus in which the communication profile is set, by using the determined communication profile.

15 15. A method according to claim 14, further comprising:

recognizing a change in communication environment between the wireless relay apparatus and the communication apparatus on the basis of a communication content between the wireless relay apparatus and the communication apparatus which have undergone the connection process; and

15 changing a currently set communication profile to another communication profile in accordance with a content when the change in the communication environment is recognized.

16. A method according to claim 14, further comprising changing a currently set communication profile to another communication profile when a fault occurs in the communication apparatus.